2003 CORN GUIDE TO HYBRID SELECTION

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Prince Edward Island CANADA

Corn Hybrids for Grain Production

Zone	Hybrid	Special Traits	Yield @ 15.5% moisture t/ha	Grain Moisture Content %	Performance Index#	Stalk Breakage %	Seed Emergence %	# Sites X Years Tested
1+2+3	39W54 PIONEER		7.2	28.1	104.2	5	89	15
1+2+3	G-4017 CO-OP		6.3	29.0	100.3	12	89	81
1+2+3	N03-D8 CO-OP*	LL/Bt.	6.9	30.0	101.4	3	90	7
1+2	39R34 PIONEER	Bt.	8.3	30.2	99.7	3	90	11
1+2	39T68 PIONEER		7.0	30.5	100.1	6	89	22
1+2	DKC 26-82 DEKALB	Bt.	7.8	30.7	100.7	5	90	11
1+2	39T71 PIONEER*	LL	7.2	30.8	100.2	6	91	7
1+2	HL 2017 HYLAND		6.3	30.9	98.2	4	88	26
1+2	DKC 26-75 DEKALB		6.8	30.9	99.3	11	92	15
1+2	39M27 PIONEER	Bt.	8.0	31.0	100.2	2	91	18
1+2	HL 2093 HYLAND		7.0	31.9	98.3	5	90	11
1+2	DK221 DEKALB		7.1	32.0	98.3	10	91	31
1	HL 2222 HYLAND*		7.5	33.2	97.1	7	91	7
1	50P20 CO-OP*	LL/Bt.	7.4	33.3	97.0	2	89	7

Special Traits: Bt. = Corn borer protection: LL = Liberty Link; * New hybrid

Corn Hybrids for Silage Production

Zone	Hybrid	Special Traits	Whole Plant Yield t/ha	Whole Plant Dry Matter Content	Performance Index#	Stalk Breakage %	% Seed Emerged	# Sites X Years Tested
1+2+3	39M27 PIONEER	Bt.	12.5	37.6	101.0	3	90	11
1+2+3	39R34 PIONEER	Bt.	13.7	36.6	107.0	3	90	9
1+2+3	HL S009 HYLAND*	XL	13.7	36.4	106.3	16	91	5
1+2+3	HL S014 HYLAND	XL	14.0	36.3	106.2	15	91	9
1+2+3	DKC 27-15 DEKALB*	RR/Bt.	14.3	36.1	105.5	3	-	3
1+2+3	39R62 PIONEER		13.6	35.9	104.9	3	89	5
1+2+3	39W54 PIONEER		12.7	35.6	102.0	8	87	11
1+2	DK221 DEKALB		12.3	35.4	99.8	10	89	26
1+2	39T68 PIONEER		12.1	35.2	97.7	6	90	16
1+2	39T71 PIONEER*	LL	12.4	34.9	99.1	5	90	5
1+2	G-4015 CO-OP		13.1	34.8	101.8	13	87	21
1+2	55T60 ELITE CO-OP		12.8	34.1	99.2	8	90	9
1	G4066 CO-OP		12.9	34.0	99.5	14	91	13
1	39G12 PIONEER*		15.3	34.0	99.4	8	90	5
1	39D81 PIONEER		12.7	33.8	98.0	7	92	13

Special Traits: Bt. = Corn borer protection: LL = Liberty Link; XL = Extra Leafy; RR = Roundup Ready *New Hybrid
Data are averages for all Maritime trials with the table values (above) indicating a hybrid's performance when grown in ZONE 2. To estimate the SILAGE hybrid's performance in ZONE 1, add 0.6 t/ha to the yield, and add 2.7% to the at-harvest whole plant dry matter content. For ZONE 3, subtract 2.6 t/ha from the yield, and subtract 3.3% from the at-harvest whole plant dry matter content. To estimate a GRAIN hybrid's performance in ZONE 1, add 0.6 t/ha to the yield, and subtract 3.5% from the at-harvest grain moisture content. For performance in ZONE 3, subtract 0.7 t/ha from the yield, and add 5.6% to the moisture content.

A combined yield/maturity index called a Performance Index (PI) is calculated from the performance of each hybrid compared to the performance of six standard hybrids which have a PI of 100. The PI minimizes yearly fluctuations due to weather or other factors. A PI below 100 indicates inferior performance and those above 100 are superior. Standard hybrids for grain corn were: G-4017, 3984, and HL2017 for early and 39T68, 39M27 plus DK221 for late hybrids. For silage corn standards were: 39W54, DK221 and 39T68 for early and G4066, G4015 and 39D81 for late hybrids.

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ZONE DESIGNATIONS FOR CORN PRODUCTION
The Maritime Provinces have been divided into 4 zones for corn production (see map below). The zone designations indicate the general potential of an area for corn production. Within any Production Zone, small pockets with better or poorer corn potential may occur due to topography, soil types, drainage, frost potential, etc... The ultimate test is to evaluate corn production and new hybrids on a small scale at your location prior to attempting any major production.

ZONE 1: (Over 2400 CHU's) Greatest potential for corn production as either silage or high moisture grain exists in this zone. Soil variations should be considered when selecting corn hybrids.

ZONE 2: (2200-2400 CHU's) Early hybrids are required for good silage maturity. The earliest grain hybrids will produce acceptable high moisture ear or grain corn.

ZONE 3: (2100-2200 CHU's) Only the earliest hybrids will produce acceptable silage on this zone. High moisture grain corn is quite risky.

ZONE 4: (Less than 2100 CHU's) Corn production is very risky and corn will usually freeze before becoming sufficiently mature for acceptable silage.

*** Note to *Bt* Growers**
When growing *Bt* corn hybrids, include the 20% non-*Bt* hybrid "refuge area" in the field or in adjacent fields within ¼ mile of *Bt* hybrids. The non-*Bt* hybrid needs to be of similar maturity, and planted in strips of a minimum of 6 rows wide. For more information contact your seed rep., agronomist or the *Bt* booklet, "A Growers Handbook; Controlling European Corn Borer with *Bt* Corn Technology."

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Copies of this publication are available at http://www.gov.pe.ca/af/agweb

Figure 1: Corn Production Zone in the Maritimes